

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Preliminary Draft Staff Report

Proposed Amended Rule 1158 – Storage Handling, and Transport of Coke, Coal and Sulfur

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TABLE OF CONTENTS

Executive Summary	1
Regulatory Background	1
Air Quality Standards	1
Health Effects from Fine Particulate Matter.....	2
Purpose and Applicability	2
Legal Authority	2
Affected Industry	3
Summary of Proposed Rule	3
Emissions	5
Greenhouse Gas Emissions	5
Cost-Effectiveness	5
California Environmental Quality Act	5
Socioeconomic Assessment	5
Draft Findings	5
Conclusion	6
References	7

List of Tables

Table 1 – Summary of Particulate Matter Standards	2
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EXECUTIVE SUMMARY

Particulate matter emissions (PM) from coal, coke and sulfur storage and handling have historically been a source of public nuisance and fugitive dust violations. Rule 1158 – Storage, Handling, and Transport of Coke, Coal and Sulfur, was originally adopted in 1983 and subsequently amended in 1999. A recent Hearing Board case highlighted the need to clarify rule requirements and tighten intent in the rule language. To accomplish this, four definitions of terms used in the exemption section have been added and the specific exemption language has been restructured. Some definitions have been modified. This amendment is meant to clarify terminology, clarify applicability for operations that are not explicitly listed, and remove obsolete language.

REGULATORY BACKGROUND

The rule adopted in 1983 covered only petroleum coke operations. During the 1990's coal, coke and sulfur handling facilities were the source of many community complaints and were issued numerous Notices of Violation (NOV) and Notices to Comply (NC) for Rules 402 – Nuisance, and 403 – Fugitive Dust. Monitoring data collected in the 1990's indicated many facilities under Rule 1158 were responsible for public nuisances (Rule 402) and for violating fugitive dust-control requirements of Rule 403- Fugitive Dust. Staff site visits found poor housekeeping and general malfunction of equipment in many cases. Staff's investigation of available control technologies has also revealed some sources were operating with enclosures and good housekeeping practices. The 1999 rule amendment added coal and sulfur to the rule's provisions and tightened requirements to reduce PM emissions. The 1999 amendments mandated all coke piles and new coal and sulfur piles be enclosed (storage, unloading and transfer operations). Furthermore, the rule set a visible dust standard. The road surfaces and vehicle movement areas where material accumulated had to be paved to allow cleaning. Trucks and trailers transporting materials had to be covered, be leak resistant, and cleaned before leaving the facility.

The current rule amendments are proposed to further improve the clarity of the rule and cover operations that are not explicitly listed but intended to be covered by the rule, and add flexibility through additional exemptions.

AIR QUALITY STANDARDS

The District monitors ambient air quality for criteria pollutants (ozone, carbon monoxide, particulate matter, lead and sulfate) at 32 locations within the Basin. The following table presents a summary of the federal NAAQS and State of California air quality standards for particulate matter. These air quality standards are set to protect public health. The Basin is not in attainment with the 24-hour or annual average National Ambient Air Quality Standards (NAAQS) for PM_{2.5}. The Basin is also not in attainment with State annual average air quality standards for PM_{2.5}.

Table 1
Summary of Particulate Matter Standards ($\mu\text{g}/\text{m}^3$)

Jurisdiction	PM10		PM2.5	
	Annual	24-Hour	Annual	24-Hour
Federal	--	150	15	35
California	20	50	12	--

HEALTH EFFECTS FROM FINE PARTICULATE MATTER

The following is an excerpt from Chapter 2, Air Quality and Health Effects, from the 2007 Air Quality Management Plan.

A consistent correlation between elevated ambient fine particulate matter (PM10 and PM2.5) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, studies have reported an association between long-term exposure to air pollution dominated by fine particles (PM2.5) and increased mortality, reduction in life-span, and an increased mortality from lung cancer.

Daily fluctuations in fine particulate matter concentration levels have also been related to hospital admissions for acute respiratory conditions, to school and kindergarten absences, to a decrease in respiratory function in normal children and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long-term exposure to particulate matter. The elderly, people with pre-existing respiratory and/or cardiovascular disease, and children appear to be more susceptible to the effects of PM10 and PM2.5.

PURPOSE AND APPLICABILITY

The purpose of this rule amendment is to clarify rule language, add flexibility through additional exemptions, and remove obsolete language used during the 1999-2004 phase-in implementation period. Operations using railcars that were not envisioned at the time of the last rule amendment have recently been undertaken. This rule amendment clarifies the requirements for control of emissions from these operations as has been the intent of this rule through original language pertaining to the transfer of materials. The rule applies to all facilities that store, handle or transport coke, coal or sulfur. Currently there are approximately 32 facilities that have been identified in the Basin as subject to Rule 1158.

LEGAL AUTHORITY

The AQMD obtains authority to adopt, amend, or repeal rules and regulations which control air pollution from Health and Safety Code Sections 39002, 40000, 40001, and 40440.

AFFECTED INDUSTRY

Staff has currently identified 32 facilities subject to Rule 1158. There are nine refineries, four sulfur handlers, two foundries, two cement companies, two secondary lead smelting operations, and 13 facilities which handle coke (as opposed to being end-users). The rule amendments would not increase the number of facilities subject to the rule, but would clarify that operations not explicitly listed but intended to be covered are subject to the rule and clarify rule provisions.

SUMMARY OF PROPOSED RULE

Proposed Amended Rule 1158 is included in Appendix A to this Staff Report and is summarized below. The text of Proposed Amended Rule 1158 included in Appendix A is in strike-out/underline format to show proposed changes relative to the adopted rule.

Subdivisions (a) – Purpose; (b) – Applicability; (c) Definitions

These sections describe the purpose of the rule, what parties are subject to the rule, and key definitions used throughout the rule. Four proposed definitions are added: “coker pit,” “dewatering truck-loading bin,” “separation pond,” and “slurry bin.” All of these definitions were questioned in a recent Hearing Board case.

The term “separation pond” is used in paragraph (k)(4) – Exemptions. It is one of four structures currently listed as being exempt from provisions of (d)(2) which pertain to covering piles of material. The original intent behind the exemption was that the four structures (coker pits, slurry bins, coke dewatering truck-loading bins and separation ponds) all contained enough water to prevent any fugitive dust emissions. A definition of separation pond has been added to clarify that a separation pond has a constant liquid surface so as to indicate it cannot be used to evaporate water off of coke and leave a dry coke residue that can then become entrained in the air. Definitions of the other three structures, coker pit, dewatering truck-loading bin and slurry bin, have also been added to improve clarity.

Two definitions are clarified, “enclosed storage” and “transfer point.” The definition of “enclosed storage” is proposed for amendment to clarify that railcars and trucks that are enclosed in compliance with subparagraphs (d)(12)(A), (B), and (C) are also “enclosed storage.” Subparagraphs under (d)(12) state the railcar or truck must be covered by a solid sliding cover, a continuous tarp, or for a truck, a slot-top cover. The definition of “existing open storage” is deleted because the phrase is not repeated elsewhere in the rule. The definition of “transfer point” includes the term “convey” intended to reflect the moving or transporting material and not strictly the use of a conveyor belt for movement. The definition is proposed to be clarified to reflect the original intent of the rule. Additionally, three definitions have been corrected for typographical inaccuracies. They are “chemical stabilizer”, “contaminated material”, and “high wind conditions.”

Subdivisions (d) and (e)

Clarifying language is proposed for subparagraphs (d)(2)(A) and (B). Paragraphs (d)(10), (12), (13), (14), and (16) and (e)(10) have had railcars added to their provisions. The 1999 amendments to Rule 1158 intended to reduce fugitive dust emissions during transport of coke which was predominantly done with trucks. Consequently, the rule language focused on

requiring explicit dust controls on trucks. However, the industry dynamics have changed and railcars are now being used to load and transport coal into and coke out of the Basin. It is unclear what technologies will be used to meet future energy needs and increases in the usage of coke or coal may result in more of these materials being shipped into the Basin, or loaded into railcars for shipment out of the Basin. Thus, it is prudent to clarify that railcars are subject to the same type of requirements as trucks regarding loading and transporting of materials. Railcars are currently specifically named in the rule for purposes of unloading requirements. The amendments proposed for the paragraphs listed above would include: 1) requiring the material be moist and transferred in an overhead loader or chute from a hopper to limit the drop height; 2) covering the material with a sliding cover or tarp to prevent wind entering the leading edge; 3) ensuring the cars are leak-proof; and 4) limiting the amount of visible emissions. Transfer points are currently required to be enclosed, controlled by water spray or air pollution control device, moved as moist material by drops less than four feet, or equivalent approved control. These amendments clarify that railcars used in the transport or storage of materials must be controlled to limit emissions.

Subdivision (g) – Compliance Schedule – Obsolete Language

Paragraphs (g)(1), (2), (3), (4), (5), (6), and (8) are obsolete due to past compliance implementation dates and thus have been proposed for deletion. The language in paragraph (g)(1) was originally included in the rule text to point out that new facilities, which did not qualify for the extended compliance deadlines in subdivision (g), are required to comply at all times. This was in contrast to certain existing facilities, which were given certain extensions of time to construct equipment and implement the rule's requirements. Now that all the extended compliance deadlines in the rule have passed, all facilities (both new facilities and existing facilities) must comply with all Rule 1158 provisions at all times unless expressly exempted. The District could now amend paragraph (g)(1) to read, "The operator of a new facility or an existing facility shall immediately comply with all rule provisions." However, the District has opted to eliminate the paragraph entirely because it is redundant (it is a truism of law enforcement that all persons shall comply with the law at all times). The remaining paragraphs proposed for deletion contain past dates. Paragraph (g)(7) refers to Interim or Permanent Compliance Plans which no longer exist but were transitional in nature and so has been reworded to state these plans are void. Paragraph (g)(8) refers to the Interim and Permanent Compliance Plan provisions that no longer exist.

Subdivision (k) – Exemptions

Paragraphs (k)(1), (6), (8), (10), and (11) also contain obsolete dates. Paragraph (7) is clarified to eliminate the use of the term "cape-sized ships," because there could be confusion as to the meaning of that term when the Panama Canal is enlarged in the near future. The 105-foot beam length still applies to the rule, however, due to limitations of the relevant ship loaders. A new exemption from provisions of paragraph (d)(2) (covering piles) is proposed for front-end loaders actively transporting materials. It is not practical to cover these piles as they are moved, nor was the intent of the rule for an Open Pile Control Plan to be filed for such activity. A new exemption from the requirements of (d)(2) and (e)(10) which pertain to covering materials is proposed for railcars carrying coal and entering from out-of-state provided once they enter a District permitted facility the material is moistened to prevent visible emissions. Coal traveling from out-of-state should not have any fine particles exposed for entrainment in the air until they reach the facility and are disturbed by processing

or eroded by remaining stationary and exposed to elements. Thus requiring the moistening of the coal once it enters the facility will be an adequate step to control emissions equivalent to the currently required method of covering the material.

EMISSIONS

Emissions from coal, coke and sulfur operations are primarily fugitive in nature and the result of poor housekeeping or failure to maintain control equipment. The amendments are clarifying in nature relative to existing sources subject to the rule. Thus, there are no quantifiable emission reductions associated with these amendments.

GREENHOUSE GAS EMISSIONS

Rule 1158 will not affect greenhouse gas emissions.

COST-EFFECTIVENESS

The proposed amendments are clarifying in nature and add flexibility through additional exemptions, and associated emission reductions cannot be quantified and thus, neither can cost-effectiveness be calculated.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

Pursuant to the California Environmental Quality Act (CEQA) and the AQMD's Certified Regulatory Program (Rule 110), the appropriate CEQA documentation will be prepared to analyze any potential adverse environmental impacts associated with the proposed amendments to Rule 1158. Upon completion, the CEQA document will be released for public review and comment, and will be available at AQMD Headquarters, by calling the AQMD Public Information Center at (909) 396-3600, or by accessing AQMD's CEQA website at: <http://www.aqmd.gov/ceqa/aqmd.html>, upon its release.

SOCIOECONOMIC ASSESSMENT

A socioeconomic analysis of the proposed amendments will be available 30 days prior to the public hearing.

DRAFT FINDINGS

Health and Safety Code Section 40727 requires the AQMD to adopt written findings of necessity, authority, clarity, consistency, non-duplication and reference.

Necessity

A need exists to amend Rule 1158 to clarify the rule's intent and thus assist in the attainment of State and federal PM standards for the South Coast jurisdiction and reduce violations of Rule 402 – Public Nuisance, and Rule 403 – Visible Emissions.

Authority

The AQMD Governing Board obtains its authority to adopt, amend, or repeal rules and regulations from California Health & Safety Code Sections 39002, 40000, 40001, 40702, and 40725 through 40728, inclusive.

Clarity

The proposed amended rule has been written or displayed so that its meaning can be easily understood by persons directly affected by it.

Consistency

The proposed amended rule is in harmony with and not in conflict with or contrary to, existing statutes, court decisions or state or federal regulations.

Non-Duplication

The proposed amended rule does not impose the same requirements as any state or federal regulations. The amendment is necessary and proper to execute the powers and duties granted to, and imposed upon, AQMD.

Reference

By adopting the proposed amended rule, the AQMD Governing Board will be implementing, interpreting, and making specific the provisions of the California Health & Safety Code Section 40001 (rules to achieve ambient air quality standards).

Alternative Control Measures

Health and Safety Code Section 40440.5, subsection (c)(3) requires an analysis of alternative control measures. However, the proposed amendments are clarifying in nature and are not anticipated to affect emissions. Therefore, an analysis of alternatives is not needed.

Draft Comparative Analysis

Health and Safety Code §§40727.2 requires a written analysis comparing the proposed rule with existing federal, State and District regulations. Health and Safety Code §§40727.2, subsection (c) and (d) further require the analysis to review averaging provisions, operating parameters, work practice requirements, and monitoring, reporting and recordkeeping requirements associated with existing applicable rules and proposed regulations. The proposed amendments are clarifying in nature and do not constitute new requirements.

CONCLUSION

Proposed Amended Rule 1158 will clarify the rule's intent, add flexibility through additional exemptions and remove obsolete language associated with the 1999-2004 rule implementation phase-in dates.

REFERENCES

South Coast Air Quality Management District, 2007 Air Quality Management Plan (AQMP), August 2007.

South Coast Air Quality Management District, Staff Report for Proposed Amended Rule 1158- Storage, Handling and Transport of Coke, Coal and Sulfur, June 11, 1999